Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. *Applicant/Contact name and address*: Stephen Negaard
4017 Brusett Rd
Brusett, MT 59318

2. *Type of action*: Application to Change a Water Right—Additional Stock Tanks 40E 30155683

3. *Water source name*: Groundwater

4. *Location affected by project*: Section 13, T20N, R32E, Garfield County

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*
The proposed change is to add four additional stock tanks to Groundwater Certificate 40E 30022006. If approved, a total of one household and five stock tanks will be included in the system. The point of diversion is a well located in SESWNW Sec 13, T20N, R32E, Garfield County. The five stock tanks are all located in Sec. 13, T20N, R32E, Garfield County, while the house is located in Section 12. Maximum diversion of the historic use is 11 GPM and 2.87 AF, and will remain the same under the change authorization. The applicant runs 110 cow-calf pairs; the proposed action would ensure reliable livestock water supply as well as improve grazing pastures utilization.

The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402, MCA are met.

6. *Agencies consulted during preparation of the Environmental Assessment: (including agencies with overlapping jurisdiction)*

Montana Department of Natural Resources and Conservation (DNRC)
Montana Department of Environmental Quality website
Montana Natural Heritage Program website
U.S. Fish and Wildlife Service website
U.S. Geological Survey website
USDA Web Soil Survey
Montana Bureau of Mines and Geology website

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The proposed project is within DNRC Basin 40E, Missouri River between Musselshell River and Fort Peck Dam. Water is diverted through a well 270 ft deep, with the static water level at 230 ft. The flow rate and volume of the original water right, which began in 2006, is 11 GPM and 2.87 AF. It will remain the same under the proposed change. The applicant has been watering 110 cow-calf pairs from the well since 2006. There is no other water right holder on the place of use.

The historic appropriation is not to exceed 35 GPM or 10 AF per year, and is thus excepted from the requirement of aquifer testing and demonstration of physically and legally availability of water [MCA 85-2-306(5)]. In this semi-arid region of eastern Montana, surface channels are predominantly ephemeral streams—streams which flow only in response to snowmelt and precipitation events. Therefore, the well is not expected to disrupt adjacent surface water flows.

Determination: No significant impact

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

According to the McCone County Water Resources Survey, the point of diversion of the original water right draws from the Hell Creek or Fox Hills Formation. Groundwater quality of the Hell Creek and Fox Hills Formation is characterized by elevated alkalinity and salinity within suitable level for livestock consumption. On the surface, the place of use (stock tanks) drains to Spring Creek, which makes its way into the Fort Peck Reservoir about 14 miles west. The MT DEQ's Final 2020 Water Quality Integrated Report and its 303(d) list reported the Missouri River/Fort Peck Reservoir as not fully supporting aquatic life, not assessed for agriculture, not fully supporting drinking water, and fully supporting primary contact recreation.

The beneficial use of the water right is domestic and livestock. The applicant indicated that some of his stock ponds have gone dry or nearly dry during 2021. With the addition of four stock tanks and fencing, he will be able to rotate the animals and manage grazing distribution more effectively, which in turn should benefit vegetation, soil health, wildlife, and water quality.

In addition, since the project involves an existing well with no increased volume and no change in use/purpose, it is not expected to impact water quality.

Determination: No significant impact.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

The proposed project is a groundwater appropriation not to exceed 35 GPM or 10 AF per year, and is thus excepted from the requirement of aquifer testing and demonstration of physical and legal availability of water [MCA 85-2-306(5)]. The applicant indicated that the water supply from the well has been reliable for 110 cow-calf pairs since 2006. Because the proposed project will not increase the flow rate and volume, the addition of four stock tanks is not expected to impact the groundwater supply. Furthermore, the well is not expected to disrupt surface ephemeral channels in the watershed.

Determination: No significant impact.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The point of diversion is a well located in SESWNW, Section 13, T20N, R32E, Garfield County. The 4.5-inch well was completed to a depth of 270 feet, with a static water level of 230 ft. Diversion is operated with a 1 HP submersible pump which pumps to a pressure tank with a switch to control water pressure. From the pressure tank, 1.5-inch HDPE pipe buried 3 feet deep and 2161 feet long runs east to two water tanks, one on each side of a fence, watering two different pastures. Another pipeline with 1.5-inch HDPE pipeline buried 3 feet deep and 2234 feet long runs southeast to two water tanks one on each side of a fence to water two separate pastures. Each tank has a shut off float valves and hydrants to turn water off and on at each tank. Each tank is 1000 gallons. The NRCS Jordan Field Office has approved a contract with the applicant to assist with the installation and cost of fencing, tanks and pipelines.

Determination: No significant impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The proposed project occurs on privately owned land and is surrounded by other privately owned land. The Bureau of Land Management (BLM) owns some parcels in nearby sections; the U.S. Fish and Wildlife Service (USFWS) Charles M. Russell National Wildlife Refuge is just 3 to 5 miles to the north. This region's land cover is characterized by mixed-grass prairie on rolling hills with ponderosa pine and juniper on ridgetops. Cattle grazing and wildlife are the main land use. Because of the project's proximity to these federal lands, the analysis of endangered and threatened species will look at designations on BLM and USFWS land within Garfield County:

USFWS—Black-footed Ferret is listed as Endangered. Piping Plover is listed as Threatened. There are no federally-listed plant species in the project area.

Black-Footed Ferret

Black-footed Ferrets are not known to migrate; adults use about a 100-acre range semi-nomadically. Black-footed Ferrets are intimately tied to prairie dogs throughout their range and have only been found in association with prairie dogs. They are therefore limited to the same open habitat used by prairie dogs such as Great Plains mixed-grass prairie, sagebrush steppe and badlands. Reintroductions have occurred annually in Montana on federal and/or tribal land since 1994 with varying success.

Piping Plover

Piping Plovers primarily select unvegetated sand or pebble beaches on shorelines or islands in freshwater and saline wetlands. They usually arrive in Montana in early May and leaves the state by late August. Most of the observations reported in the state are for breeding individuals. If conditions are right, alkali wetlands, lakes, reservoirs, and rivers can all provide the essential features required for nesting. 26-62 birds have been observed in the last 10-15 years in northeast corner of Garfield County.

BLM—Twenty five terrestrial animal species are designated as "Sensitive" in Garfield County. They include 5 mammal, 14 bird, 5 reptile, 1 amphibian species. No plant species have special status by BLM.

Mammals: Townsend's Big-eared Bat, Black-tailed Prairie Dog, Eastern Red Bat, Hoary Bat, Swift Fox.

Birds: Sprague's Pipit, Golden Eagle, Burrowing Owl, Ferruginous Hawk, Chestnut-collared Longspur, Greater Sage-Grouse, Mountain Plover, Black-billed Cuckoo, Caspian Tern, Loggerhead Shrike, Long-billed Curlew, Sage Thrasher, Thick-billed Longspur, Brewer's Sparrow.

Reptiles: Spiny Softshell, Snapping Turtle, Plains Hog-nosed Snake, Western Milksnake, Greater Short-horned Lizard.

Amphibian: Great Plains Toad

This is a project which adds four stock water tanks to an existing use of one domestic household and one stock tank. The pipelines supplying to the new stock tanks will be buried 3 feet deep. Although 3034 feet of fencing will be constructed to improve grazing rotation and livestock watering distribution, it is not expected to impede wildlife travel or migration. Because improved grazing benefits vegetation cover, soil health and thus water resources, the proposed project should result in an overall positive impact on wildlife. In addition, the applicant indicated that several stock ponds near the project site have nearly dried up in 2021. Added stock tanks would support more reliable water source for wildlife as well.

Determination: No significant impact.

Wetlands **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

According to the National Wetland Inventory website, there are no wetlands in or near the proposed place of use and point of diversion.

Determination: No significant impact.

Ponds **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Several stock ponds exist near the project site. The applicant indicated that some became nearly dried up last year. Therefore, the proposed action would increase water sources for wildlife.

Determination: No significant impact.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

According to the U.S. Geological Survey, the project site is situated in a geologic unit named the Hell Creek Formation, which was deposited in a shallow marine fluvial environment during the late Cretaceous Period, about 66 million years ago. It is composed of light gray, bentonitic claystone that alternates with massive sandstone interbedded with carbonaceous shale. The unit can be as much as 1,100 feet thick.

Another geologic unit that is common the same region is the Fox Hills Formation, around 69 to 70 million years old. It is characterized by fine- to medium-grained, non-calcareous sandstone in upper part, and interbedded sandstone, siltstone, and black shale with calcareous concretion zone in lower part. Thickness ranges 98 to 148 ft. The Hell Creek Formation in Montana overlies the Fox Hills Formation and underlies the Fort Union Formation. Together, they form a hydraulically connected aquifer which many wells in the region tap into.

According to USDA Web Soil Survey, the soil unit in which the pipelines will be excavated is the Floweree-Cambeth silt loams on 2 to 8 percent slopes. This soil series consists of deep and well-drained silt loam on low hills, with low infiltration rate and moderately high erosion potential. With electrical conductivity rated at 2-3 mmhos/cm, this soil is classified as very slightly saline. Its suitability for shallow excavation is rated as "somewhat limited", which means that "the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation." The NRCS Jordan Field Office has stated that the project met the NRCS standards and specifications.

The soil unit's susceptibility to compaction is high. Soil survey describes this rating as "After initial compaction, this soil is still able to support standard equipment, but will continue to compact with each subsequent pass. The soil is moisture sensitive, exhibiting large changes in density with changing moisture content." This quality is probably suitable for backfilling and compacting the pipeline trenches. The ground around each stock tanks is expected to be

compacted by livestock use; the addition of four stock tanks should help alleviate the extensive compaction that would have resulted around a single tank.

Determination: No significant impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

According to soil survey, the Floweree-Cambeth silt loams has a range production of 1378 pounds per acre per year in a normal year. This forage productivity is adequate to support the applicant's stocking rate. While disturbance from the pipeline construction would likely invite weed invasion, it is not expected to exceed what normally occurs in cattle-concentrated area.

Determination: No significant impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

During the construction, a normal amount of dust is expected. However, it should not present a risk to the vegetation or animals. Once the construction is completed, air quality will no longer be an issue.

Determination: No significant impact.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands.*

Determination: NA--Project not located on State or Federal Lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No other additional impacts on environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: There are no known local environmental plans or goals in this area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The project is located on remote, rural private land which has been historically used for cattle ranching. It will not affect the quality of recreational and wilderness activities.

Determination: No significant impact.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

The project is located on remote private land and will not affect human health.

Determination: No significant impact.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: There are no additional government regulatory requirement on private property rights associated with this application.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) Cultural uniqueness and diversity? No significant impact

(*b) Local and state tax base and tax revenues?* No significant impact

(c) Existing land uses? No significant impact

(*d) Quantity and distribution of employment?* No significant impact

(e) Distribution and density of population and housing? No significant impact

(f) Demands for government services? No significant impact

(g) Industrial and commercial activity? No significant impact

(h) Utilities? No significant impact

(i) Transportation? No significant impact

(j) Safety? No significant impact

(k) Other appropriate social and economic circumstances? No significant impact

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts This application does not present possible secondary impacts on the physical environment and human population.

Cumulative Impacts This application does not present possible cumulative impacts on the physical environment and human population.

3. ***Describe any mitigation/stipulation measures:*** N/A

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** An alternative analysis of the project identified a No-Action alternative to the addition of four stock tanks. This alternative would not have any direct impacts that are typically associated with stock water use. The No-Action alternative would not allow the applicant to meet the purpose of and need for the project.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a water use permit if the applicant proves the criteria in 85-2-311, MCA are met.

2 Comments and Responses

3. ***Finding:*** *Based on the significance criteria evaluated in this EA, is an EIS required?* No

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified, therefore an EIS is not necessary.

Name of person(s) responsible for preparation of EA:

Name: Lih-An Yang
Title: Water Resources Specialist
Date: July 28, 2022